Rich and typically talking about collector and I'll make sure some of the resources and links I have get to Lori and she will share them out

For my transcriber Kuykendall

Please stand by for realtime captions.

At this point we are going to move onto a presentation from rich and Tiffany Myers this is a 2015 in embedded GS SS training in both California -- and Richard you are on

What I'm going to do is just give you a presentation on what we did on Bulls fire that was up in weed California in September of 2014 -- we used the collector app to collect all the damage -- fires: damage inspection instead of damage assessment because in order to get FEMA to cover the cost of doing the damage inspection, cover those cost we have to change it to damages inspection not damage assessment -- so we know: damage inspection.

So the fire burned in September of 2014 and it burned pretty much stopped after the first day but burned right through the North East side of town -- Northeast side of town and burned a lot of structures. They wanted a damage inspection team to come out and assess the damage and collect all the data so we could provide a report for the team and to the local authorities.

So the objectives of the damage inspection the acronym for that is DIMMs is what Cal fire calls and -- and we wanted the preliminary rapid damage assessment where we just go up there collect all the information would only damage structured and they wanted to focus on residential properties at buildings and commercial buildings they took information on vehicles. Also but that wasn't the critical most critical thing. A lot of times there's vehicles that are over drop a while then the people adopt an abandoned about all that so they're looking more that the actual residence in the area lost -- not just junkers that were in the woods or whatever.

We used the draft Cal fire damage inspection form that our state fire marshal's office developed and has all the attributes that they wanted to collect when we do a damage ends section so we used local vendor fire what they offered to assist at no cost and also as is really supported the effort through fire what -- wonder what it is a reporter and they fire what is a company that flat runs a wildland fire.com went website also -- we wanted to field test the ArcGIS Collector app that was kind of the as three and 10 on that was actually use a collector app and ArcGIS online to July damage inspection collection using ArcGIS online and the collector app and we kind of doing that that's kind of why they provided the services for pretty -- capabilities of ArcGIS Collector can collect factor data -- we were only collecting points as far as damage inspection -- and you cannot collect points lined and polygons to use in a collector app -- it can cache maps and data when you're off-line so when you don't have Internet connectivity and the collector a few can still collect data while you're out there like Burns said and when you get back to where you have connectivity, there's an option to sync it back up to the Internet and it will all that data will go be uploaded to ArcGIS online.

You can also use the map on the have to worry yourself -- it has the imagery on it or you could change that Topol is our streets just like ArcGIS online you have the same base maps as ArcGIS online when you're using the collect traps we can change your base maps on their with street names and all that stuff and you could use although we do like to use it because he uses credit you could use a geocoding to get addresses and all that stuff also if you wanted.

So as far as the formal used the state fire marshal's office developed is we collect created a feature class in a geo-database with all the attributes from that form and we had all the fields and we had domains field for all the different pick list and would like the people of the field to use when they collected the information so they didn't have to manually go in there and enter all those things manually because that makes it bad and after the incident if you wanted where he everyone everyone might've entered things differently so they were able to have pick list for like the structure type -- the percent damage -- what the how much damage was done to it -- the whole bunch of fields in the feature class that have pick list so they had to go and pick the list when they went out there collected the data so it would be really quick when they enter the data.

With each point they collected we had them take one photo of the best perspective of the structure -- damage or destroyed structure so they could take a photo and that photo would be tagged to that point and when they that have connectivity that point will automatically be uploaded to the ArcGIS online and people that the incident base can actually view the data popping up on the screen and click on the point and look at the photos and ArcGIS online and they can actually see what's actually going on as they collect the data and is very nice.

You can configure that app to do whatever you want as far as what the incident needs are so you can adjust what you want to collect and adjust your DOT or feature class and add more fields. Or domains and you can adjust it to our you want that however you want -- what type of data you want to collect you can adjust it to the data needs that you want to collect from that data inspection.

We performed five DIMMs teams to collect the data there's two person teams we had of Hobson state fire marshal require life safety inspector on each team in each team we broke up the area that they were going to inspect in the different team areas so we had a polygon on the collector that identified their areas so they can see what area was there when they looked at the app the map in the app -- each team was assigned a block of unique numbers to say what they would -- inspection number -- and they enter assigned a block of numbers 100 numbers that they would use for their team -- we had five geographic areas that I told you we developed a polygon for any steam have their own area that they were going to cover -- we had some extra pots that were staged and scored a other officials to evaluate infrastructure and other assets for damage also they also did had a team that just did a quick drive through of the whole area to kind of give the team the team wanted some quick figures right away as to on the structures were damaged so we had one team that just went around and counted how many structures and that they could give that information to the team for immediate notification of the local authorities..

So we used iPads and iPhones to collect the data and they had iPhones were used as a Wi-Fi hotspot and each team had an iPhone and an iPad so one person at the phone the other person had the iPad -- and then the phone was used for they were Rod and enabled iPads -- question --

Richard this is Jack HERC I thought that CAL FIRE had some policy were not allowed to use iPhone or iPads -- did you run into that Paul

The iPhones and I paths were provided by FIRE WHAT -- all the not

[indiscernible - multiple speakers]

IT geeks didn't care

It was on our network it was on the Ezra Cloud IRS online it didn't touch your network -- IT and we got the approval from our CAL FIRE IT this year to use the Ezra Cloud or the if we have to do damage inspection this fire season

You'll find all of the contract this is Lori a lot of the contracts we have iPads per rental so if you need to get a hold of something that we that is a vehicle to get you on a because it's not on the Forest Service called either we don't have BYOD or bring your own device type of policy in place at this time so you can actually rent those and use them.

So as far as the data and map the entire wedding CAL FIRE GIS staff -- build the file geo-database with the attributes and feel domains from the CAL FIRE dense form they developed the arch wire GIS map collector would use and layers in the map we had the DIMMs geo-database for the feature class the fire perimeter and we had that DIMMs period and I are HRS on that's all that's available to the field observers out there collecting the information it's available in ArcGIS Collector so they used the world hi rest imagery as a background and that had the roads and everything on it to and they developed unique symbology -- as far as for when they take that as a 50% destroyed, 100% destroyed, we had different categories for the percent damage -- we developed symbology so that there would be different colored house on the map based on the percent damaged so when they looked at it back at the incident base they could use that symbol to determine what percent damage each of those structures were -- this is just looking at the domains grading the domains for the feature class that was used the DIMMs feature class -- we trade the DIMMs teams these are no GIS experience the State Farm marshal people there might've been a couple of them that had minimal DIS expect GIS express but these be didn't know anything about GIS just field observers and were able to train them the first day how to collect the new point how to edit and move the point because we wanted them when you first collect the point is going to collect it where you're standing what we want them to do is move the point run on top of the structure that was destroyed or damaged so we talked to them how to show them how to edit the points them if they needed to move them we show them how to capture the photos and delete incorrect points and photos and we provide them with hard copy maps to just refer to with the general area because when you're looking at a little iPhone or I had you just and into that area and give them hard copy maps with their team areas the team area polygon did fire promoter I think might've had parcels on there to so they had that map as a hard copy to go out there -- you not as when you're looking at some little map app you just zoom in a can't see the big picture so then when you zoomed out things might be so small you can't tell what's what so having that hard cap a map is a good thing to couple with these people that are collecting the data. After training on we deployed and started collecting data we had up flag all the structures that were done so they did fit in -- especially when you're right adjacent to a boundary were another team was inspecting if they went over there and see the structure was plagued and it was data was ordered collected for it -- the DINS Team and the GIS at the ICP the DINS ICP were able to monitor the data collection and arch -- on a large touchscreen -- there you can see in the picture so they could watch and zoom in and out it's nice having that is green large touchscreen monitor their and they could keep track of what's going on the FIRE WHAT staff assisted the team in the process and stuff along with Ezra personnel so day one they collector at work really well we found some misuse that some the teams took multiple pictures and then it's kind of hard when you have alterable pictures associated with that point for exported and bringing it right into the actual report form that they reusing so we said okay we are willing to take one picture per structure just find the best angle to get the picture and take one picture and that worked out much better. Could break and for the DIMMs teams they could find us get things all set up and collecting stuff and learned about it and they do we address a lot of the issues that we have the first day and then we added a couple new fields to the table to be able to collect the actual we want to collect the point per structure so we want to and a FIRE WHAT parcel it was on and we gave them an inspection number also so that out of helped identify the better when they did the final report so on the second day they collected 100% of the data on all parcels within three hours which was really good so data on the Avenue can be downloaded to the save file TSP and file geo-database stored as attachments in the DIMMs filed geo-database due to bandwidth issues we were able to download that that is on the incident so we just downloaded the shape file and is read and FIRE WHAT staff got the photos for us and take them with a good filenames that we could use to know what points they were associated with.

So the report they did was created in access database be rejoined the points to the possessor data so we would have all the order information and all that stuff the APN and other attributes that they wanted and the DINS report and each page and report polls data from the data's attributes and the photos annually asserted in the report and we just have the process for the photos can automatically be imported into the report now so that makes it a lot easier and then the report had some GIS maps and them. So here's a sample of the page the page in the report we had that unique ID on the upper right in the photo and other various information down in the body of the in the body of the report here and there is a photo that they take

Here's the overall map of the area inspected as all the structures -- all the different structures that were destroyed here -- and fire perimeter around here -- and here's the final statistics of what was damaged or destroyed and as far as commercial structures and residences about building so they lost quite a bit on this fire.

We had some enhancements suggested enhancements add more options for downloading the app -- add capability to extract and name photos based on attributes in the table which is pretty something we would like to see -- capability to enable bull and disable editing on each layer in all layers in a map or editable which is became a problem when the teams actually deleted there and DINS polygon area one or other collecting database selected it and deleted it so we wanted to have the capability to select and make layer selectable and on selectable and and simple selection is available in RTI collector and online and we want to streamline the process of adjusting settings and published mapped to a Geo well that be another nice thing if we could do that and we'll take Russians at the and so Tiffany will go in and show you what we did when we use the process so here's Tiffany Meyer

And we also have a section that we will be doing a section at the end of the entire A2 well with all of our presenters that are going to be available to answer your question and that portion were not going to have recorded or transcribed it will be just taking summary notes associated with it.

So I will some will be reiteration of what you guys have heard from burn and -- I will walk you through the process I go through set up my collector abhor the web service use the collector app and its pseudo-demo part of the because it's PowerPoint but then when I get to the collector app I will show you how to actually use it.

So before I even get into ArcGIS online I set up a database and arc catalog and set up the domain and shows you that little bit and it's really nice you can set these drop-down menus for the people out in the field and then there's a lot less room for data entry error because they have to select the drop-down and it's easier when you're out on the field collecting the data to and know exactly what you're looking for because the drop-down prompts to and that happens in our catalog and I go to our -- Arc Map and set up the symbology that's going to go into the ArcGIS online and you can set up symbology and ArcGIS online but I think you have more control to do it and Arc Map so I like to do it there and once I've created the symbology, then I serve up the future class as a service that then I bring it into ArcGIS online. And here you can see this is the round prior -- we had 7000 acres burned out by Bishop in February this year a little alarming and you can see the data is collected and the three blocks of colors show the areas that the father the FOB the responsible for collecting and teams the green team in the old team [indiscernible - low volume] in the blue team and so they were responsible for finding all the damage and destroyed homes and their colored areas.

That makes the data collection a lot more efficient and it overlaps data collection. Once we get that get the web service set up -- there's a little bit of configuration that you want to do and -- burn shows us a little of this and you can turn off attributes in the web service and when you're in the field still collectors are looking at a bunch of extraneous attributes that confuse them so we just limit the attribute to show the what we want data collected for and then later on we can go in and add the basic information like the incident member number and name back in Arc Map.

Then also you can enable attachments in the web service and so that makes it so that you can add photos out in the field the photos attachment and of course you want to share with your group so that all the people that are logged in on your group can edit those database and you can set up bookmarks and make it easier to find your place -- on the ground.

So now I want to pop into collector app grow quick and give -- if anyone hasn't used it I would give you a better sense of how it works --

Hopefully you can see this that's the collector app.

These are all the different maps that I have set up and shared then ArcGIS online and I can select the one that I want to edit which I will use the round damage assessment incident -- so I come into the collection site and -- a little to her -- a little to her -- you can change the map places you can find the images nicest for damage assessment because you can see the actual homes but you can also going to -- you can get the topo maps and street maps and I will leave it with the imagery -- back we have the bookmarks and --

We can measure things -- I never use that -- apparently you can measure distances -- you can zoom into your location which we already are that now I want to add a point -- and what I will do is test a little + and that brings up this database I set up and ArcGIS online and these are the domains -- now you can see that there was also the survey zone and we wanted to have them in the collector app so that the survey posted see their areas that they're surveying -- unfortunately they have to be editable also -- Richard mention that and I think that makes it a little messy because the people on the field select the survey zone they will start editing those instead of the point but that's the way it is and I think as three is working on that the SRI is working on that -- as three as three as 3% they're working on a way to eliminate that opportunity to edit the wrong layer -- so I want to edit the damage later here so I came to a house it's destroyed -- I have other options may be partially destroyed but the one I'm at McClellan is destroyed so I will select the stride and this brings me to this option to populate the field and the database so I can enter the address, I have to type the address in manually because there's too many addresses to make that a drop-down -- and I have to go in and do the street -- and not worry about spelling now --

If you're like me and you don't like to type on the iPhone, you can click the little microphone next to the and I use that all the time. You'll find out the FOB hops in those posts and even -- we don't like to type so talk to text works great and encourage people to repeat before they submit -- much better -- when you're out in the field and screen gets all blacked out by the sun and you can see what you're typing this will be even more helpful.

So those are my data entry manually but now I have the drop-down options so -- my bench clearance badge clearance -- vegetation clearance and I can't keep going through and populating these fields with my drop-down menu -- and I will continue but you get the idea. Then I can take a photo and -- at a photo it go straight up into the clouds so it does not bog down my phone with a bunch of big huge files. That's nice -- [Audio cutting in and out]

While she's doing that you can exit collector and use your phone or your tablets made of camera application and take the picture and that's another way to get all of that information and save it and exported for the dropbox. The question was can you take the picture on your phone and not within the application --

Now I have my attribute information and my photos and I can submit it -- it submitting all the data backup into The Cloud into the AGOL database that I set up initially -- and if I'm not too satisfied with where the point is, I can move it and selected and --

The point she created is on the building that we are in and a little hard to see on the screen but it's the one the south and that one she's tapping on is a point that I added -- but it's in the wrong spots will move it --

I was out for a walk --

I selected -- we had a quick question on the line -- what happens to a photo if you're not connected to the web?

So you can take all of this off-line and then everything gets stored locally on your device until you come back to a web service or Internet signal's cell service and use synchronize and so that when you synchronize a photo and all the data will be published and added to the ArcGIS online. The synchronization the question was is that automatic or manual and the synchronization is a manual process until you open it up and you say I'm ready to synchronize now click sync it will tell you it a little number how many edits you made since your last synchronization.

Wanted to tell you guys how we can move that point -- move back select that point I can edit it -- and if I go in and tap or I wanted to be on the parking lot -- and it moved it and it can update that point and I can also go in and update attributes if I realized I entered something incorrectly or missed something -- so one of the beauties of this system is that -- I'm out in the field or the people back in the office can watch the data being collected live if they've got cell service -- if they're collecting data off-line that's not the case -- I want to give you a little taste of that it's pretty slick and is gets base camp excited to be able to see what's going on --

I will go into my AGOL account, and -- I have a cell Observer all in the field right now Natalie collection points -- you can see go there live they were not there when we were collecting data in the collector app but since I've been doing this demo my field observers have been very busy -- burn -- pretty cool so if I'm -- the leader who is interested back at camp I can go in and I can even look at the attributes of these points and see what's going on -- click on it and I can see --

I can see the attribute and then I can even look at the photo -- and then like Vernon was saying I could share this with other organizations to the fire was Donna Ventura County then you can log into his AGOL account and I could share this with him and he could watch what's going on out on the field in his County as we are collecting the data

But the main purpose that we use at collector app for is really to collect the data and our main purpose is to create that report that Richard was showing that -- couple more slides to wrap things up -- get the full picture of our process -- we ever data -- and then we have our data and may we actually bring it back into Arc Map and I exported out of AGOL because there's often some reconciling to do with the data and we often want to join the parcel data onto it gets for detailed information about each house that was affected or we will want the APN number and sometimes the owner name the value of the home things like that -- so I will do overlays with parcel data and then there's often some issues with the dated just with the placement or perhaps the issues with the parcel data and we want to make sure that the houses within the correct parcel so these kind of reconciling processes are much easier to do in Arc Map and then also we can create nice nap and Arc Map and then we can abstract a photo so we can include them in the report use a Python script to do that here's a map in the awesomeness of this map is sitting in this room -- around fire -- once we have the data I exported into access and create a report so we can generate a page for every single damaged or destroyed home that gives basic information that was collected out in the field and then also the information we pulled from parcel data and also the photo and it automates this report for every single record. And that's what's report looks like but there's a page for every single home. So kind of well let's see -- the pros and cons I've discovered with using this app in AGOL -- it improves the data accuracy immensely. Because when people are out the field GPS in points are not on the point were trying to collect all be on the street or across street so sometimes it's really hard to tell what house they're actually assessing but with the collector app they can put the point right on the house that's are looking at and you'd be amazed at how helpful that is when you're back in the office trying to reconcile your data because you know exactly what house they were looking at when they were collecting the data. And it's really easy for the field post to collect the data because all they have is her phone or their tablet or iPad instead of like clipboards and papers and cameras and GPS is hanging over them they have everything in one unit and is pretty slick Nixon's really easy -- and then the data sharing is really nice that the round fire the Dan's assessment

lead listen in Sacramento watching is collected and and he was just thrilled to be able to see what we were doing -- and then eliminate manual data entry which is a huge pain in the butt back and you'll days people would collected data on hard copies forms and we'd have to go back to the office and manually enter everything -- it was a huge headache so it 11 is that which is fabulous. Pecans -- is very dependent on bandwidth. Can't export your data if you don't have good bandwidth especially if you've been taking lots of photos because the gear database DARTS loading -- that can be a real showstopper actually if you don't have good bandwidth and your incident you might be back to paper maps -- vendors deftly some hidden bugs and quirks and some not so hidden bugs and quirks we've been coming across there's some funky stuff with the domains and the edible layers which is being fixed but we will see -- and then it is not limited map and reporting capabilities that's why were bringing it back into Arc Map to finish up the process and the third photo management issue is kind of clumsy right now apparently as ESR writers work and that as yours working on that you have to run a script to attractor photos and maps were really weird naming conventions and is kind of a big messy process to extract your photos but I believe as as three is working on that too and that is that you does look very squirmy

We've been sitting on for couple hours en masse by transcriber fits okay to go in.

[Event Concluded]